

Specification for Fire Test for Valves with Automatic Backseats

API SPECIFICATION 6FC
FOURTH EDITION, MARCH 2009



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Upstream Segment

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Foreword

This specification is under the jurisdiction of the API Committee on Standardization of Valves and Wellhead Equipment.

This standard covers the requirements for testing and evaluating the performance of API 6A and API 6D valves with automatic backseats when exposed to specifically defined fire conditions. For the purpose of this specification, an automatic backseating valve is defined as a manual or actuated valve which allows the stem to effect a backseat against the bonnet and isolate the stem packing, by automatic means, when exposed to a fire.

This standard is not intended to cover end connections. These are covered in API Specification 6FB, *Specification for Fire Test for End Connections*.

Other standards under the jurisdiction of this committee include:

- a) API Specification 6A, *Specification for Wellhead and Christmas Tree Equipment*;
- b) API Technical Report 6AF, *Technical Report on Capabilities of API Flanges Under Combinations of Load*;
- c) API Technical Report 6AF1, *Technical Report on Temperature Derating of API Flanges Under Combination of Loading*;
- d) API Specification 6D, *Specification for Pipeline Valves (Gate, Plug, Ball, and Check Valves)*;
- e) API Specification 6FA, *Specification for Fire Test for Valves*;
- f) API Specification 6FB, *Specification for Fire Test for End Connections*;
- g) API Technical Report 6F1, *Performance of API and ANSI End Connections in a Fire Test According to API Spec 6FA*;
- h) API Technical Report 6F2, *Fire Resistance Improvements for API Flanges*.

Conversions of U.S. customary (USC) units to international system (SI) metric units are provided throughout the text of this specification in parentheses, e.g. 6 in. (152.4 mm). SI equivalents have also been included in all tables. USC units are in all cases preferential and shall be the standard in this specification. The factors used for conversion of USC units to SI units were taken from API Publication 2564, and are listed below:

1) Length:

1 inch (in.) = 25.4 millimeters (mm) exactly

2) Pressure:

1 pound per = 0.06894757 Bar

square inch (psi) = 0.006894757 MPa

3) Temperature:

The following formula was used to convert degrees Fahrenheit (°F) to degrees Celsius (°C):

$$^{\circ}\text{C} = 5/9 (^{\circ}\text{F} - 32)$$

Referenced standards may be either the applicable edition shown herein or the latest revision, provided the manufacturer can show that the latest edition meets or exceeds requirements of the specific edition listed. When the latest edition is specified, it may be used on issue, and shall become mandatory six months from the date of revision.

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Shall: As used in a standard, “shall” denotes a minimum requirement in order to conform to the specification.

Should: As used in a standard, “should” denotes a recommendation or that which is advised but not required in order to conform to the specification.

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Suggested revisions are invited and should be submitted to the Standards Department, API, 1220 L Street, NW, Washington, D.C. 20005, standards@api.org.

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